## MASTER MIND + MECHANICS = SPEED

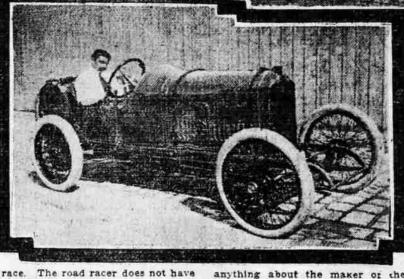
Automobile Racers Use Various Artifices to Beat Their Opponents to the Finish.



With the coming of summer the speed king again comes into his own, and men of all nations will vie with each other for the championship of the world with a benzine horse under them. Automobile racing has outdistanced all others as far as speed is concerned.

In horse racing a driver must know his horse. He must know how fast his horse can go, how much his horse can stand, and he must depend on his own driving of the horse to win the race. In automobile racing there are many points that help in the victories.
In the first 500-mile Memorial

Day race ever run at the Indianapolis Speedway in 1911, the winner, Ray Harroun in a Marmon, won be-



One of these is Ralph Mulford who made the Lozier car famous. Another is Barney Oldfield who always smokes a wooden cigar which some folks think is a real cigar. Then there is Harry Grant who drives an English Sunbeam, which Guyot formerly drove. Grant has won three Vanderbilt races,

Oldfield used to be considered & eckless driver. He won all kinds of races big and little. He is now considered one of the most coolheaded racers in the country. He says others may risk their lives if they will but he is going to play the

The foreign racers who have invaded America are nearly all strang-



cause he was coached to victory. Victory was won in the pits, automobile bugs put it. He did not drive the machine himself, except technically. The brains of the race he run were on the side lines. Harroun was the driver and could respond to the demands of his coaches without mistake. As he sped over the track, going 74 miles an hour, he wanted to go faster.

"You're going fast enough," came the word from the side lines. Harroun kept the pace and won.

The next year Joe Dawson won in a National car, going almost 79 miles an hour. Ralph DePalma, the champion hard-luck driver of the world, was in that race. He drove in a Mercedes. It broke down after everybody else thought the race was him. DePalma and his mechanician got out and pushed the car around the track in hopes of getting in on time to still win, as they were so far ahead of all the rest. Joe Dawson saw his opportunity. Dawson had been driving steadily and using his head. He did not push his car faster than it could go, and he seemed to know just about what his car could stand. When he saw DePalma break down he kept on driving and came into the last lap, winner of the race.

Other drivers win because they watch the road and take every possible advantage of it. They hug the inside of the track on a speedway so as to make the distance as short as possible.

Hughes is one of the men who has won races by his speed in changing tires. Hughes is the fastest tire changer in the world. He has never won at the Indianapolis Speedway, which is the greatest long race of America, but he has won in other races of almost equal importance. In one of his races he changed tires in twenty-one sec-onds. As he was racing at Indianapolis one year, he realized one of his tires was getting weak. He got everything in readiness and then stopped the car, jumped out. changed the tires and had his machine running again.

FRENCHMAN KNOWS INSIDE OF CAR.

Last year the winner at the Indianapolis speedway was Goux. Goux won because he knew the inside of his car. He had seen every part of his car put together. All of the greatest racers of Europe are noted for their familiarity with their Goux drove a Peugeot. which he had built himself or had watched the building. He prac-ticed with the machine for months before the race. When he was ready to start he thought he knew just what his machine would do. His race showed he thought right,

Bob Burman is a peculiar racer. He holds the world's record for short dashes. Burman is a dasher and not considered a distance racer. In foot racing there are different styles of racers. There are the men for the dashes, the men for the long distance races and the middle distance runners. The dashers usualdo not do so very well on distance. They lose because they are so constructed physically that they cannot undergo the long gruelling grind of a Marathon. They haven't

Burman goes into the race with speed. He cannot drive slow. He wants to get over the ground in a hurry. His dash wins the short In the long races he often gets a big lead on the start and his machine will not stand the gruelling

This year he entered in the Indianapolis race with a car of his own construction. He had worked

on the speedways. The 500-mile race takes six and half hours to run. It is a gruelling ride and men of high nervous tension are wrecked sometimes as the result of the speed. The races are not limited to au-

to keep going over the same track and making the same turns with his

steering gear in the same position almost all the time. Tire troubles

result from the continuous racing

tomobile owners advertising their It is true that automobile owners have entered cars in the races to show them off for the advertising to be gained from winning

siderably supprised at winning. gave the money to charity.

There are men in the races who

anything about the maker or the car. He races for himself.
Bragg won the Vanderbilt prize in

Milwaukee one year. He didn't know what to do with it as he had

are youngsters. There are men who become great racers starting from their own shops. One of these is Pullen. Pullen is 22 years old. He already has won the Vanderbilt race. He began working for himself early in life as a mechanic. He worked hard and long in the shop and how he did like to speed. He entered all the little club races in his own community and then went in for the Vanderbilt race at Los Angeles, winning it. He drives a

AT top, from left to right
—Albert Duray, Christiaens, Earl Cooper, Boillot and Ernst Friedrich. Second row - Barney Oldfield, Ralph De Palma and Teddy Tetzlaff. Lower left-Jules Goux (above) and Guyot. Lower center-Bob Burman. Lower right-Louis Disbrow (above) and Chassagne.

ers. Last year Goux and Guyot entered the Indianapolis race. When Goux won other foreigners saw they too might have a chance and came over this year in numbers. One of the foreigners is Duray, who drives a Peugeot. He is an American born Frenchman but cannot speak Eng-lish as he went to France with his parents when a boy. Other foreigners are Friedrich, a German, in a Bugatti, Thomas, French, in a Delage; Christiaens, a Belgian, in an Excelsior; Chassagne, French, in a Sunbeam; Boillot, French in a Peugeot. These men all entered for the Indianapolis with Goux and Guyot. Racers fear Ray Gilhooley when he enters a race. He is an Irishman and a fearless driver.

This is the pilot whom De Palma once acclaimed the only man he ever feared, stating he could never tell what he was going to do next. On two different occasions, says Ralph, he saw the mad Celt tear through a wooden fence at full tilt. taking the chance of getting killed just for the joy of passing him at a risky curve. Nor do his smashups seem to have affected his speed lust, as his hankering for the steering wheel and throttle today is greater

Racing drivers, when they see Gilhooley coming, usually get out from under, for fear that in his eagerness to get ahead he will drive right over them. Step on it is all he knows, they say. Ordinarily he

punishes his mount to the limit. Success of foreigners in winning many races is credited to the fact that they know their cars thorough-Some Americans do the same but in Europe there are no exceptions, they say.

Terminology.

"She's the limit!" "Your finish, eh?" -Judge.



In Europe the long races

the wind.

Why a racer should be fine on short sprints in his automobile and not so fine on long distance races is hard to determine. His physical makeup has nothing to do with it. It is his mental makeup that takes him to victory in one and not in the other. If he can change his mental makeup there is no reason he should not win in both.

Men who back Bob Burman have thought year after year that he would charge his mental makeup. long over it and his hopes for vic-

tory with that car were good.

The coming of European road racers to race at the Indianapolis Speedway this year makes it the greatest racing track in the world. It is the grand prize event of them The prize this year was raised to \$50,000 to be divided among the ten winners in the 500-mile race. A prize for the winner of first place was placed at \$20,000. The Indianapolis Speedway was built in 1909 at - cost of \$5,000.000. It is two

The race is purely a professional

one because of the money prize attached. Yet there are some amateurs who enter the races without any hopes of reward. They enter for the sport and because they like to show how fast they can go. Two and a half miles in circumference. famous American racers are Spencer Wishart and Caleb Bragg. They are both millionaires and enter the big races just for fun. Wishart road races over the wonderful roads of France. There is a great advantage in a road race over a speedway drives his own car and doesn't care Mercer.

This year sees a new speed king Klein who drives a King car. Klein was a mechanic until a short time ago. His knowledge of the inside of the car makes him a valuable man. Klein was almost unknown until he registered for the Indianapolis speedway race. Then in looking up his record they find

he is a good driver. There are some racers who are natural favorites of the crowds.